

ELECTRO MAGNETIC FLOW METER

Beyond Accuracy

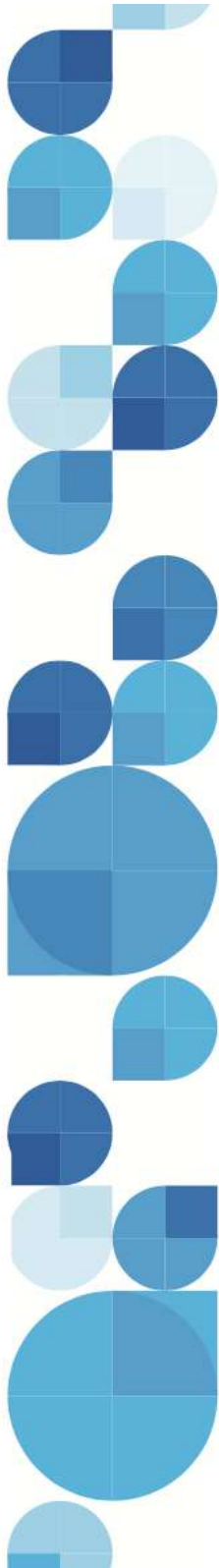
Our Electromagnetic Flowmeters:

In the complex realm of fluid measurement, **precision and reliability** are the cornerstones of success. **Electromagnetic flow meters**, the stalwarts of this domain, offer a fascinating blend of technology and scientific principles.

At their core, these meters harness the power of **electromagnetic induction** to gauge the flow of conductive liquids. With no moving parts and a **non-intrusive design**, they ensure minimal interference with the fluid being measured, leading to exceptional **accuracy and longevity**.

What sets Fluido's electromagnetic flow meters apart is their versatility - they excel in measuring a **wide range of flow rates**, are **unaffected by fluid properties** such as density or viscosity, and can operate in **harsh conditions**. Moreover, their digital capabilities allow for **real-time data** collection and seamless **integration into modern control systems**.

With **AES Sense Pvt Ltd**, your fluid dynamics will never be the same again - because we measure **Beyond Accuracy**.



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Introduction

AES magnetic flow meter, also known as electromagnetic flow meter or mag meter, is widely used as it has less obstruction, cost-effective and gives accurate measurement. Electromagnetic flow meters don't have any moving parts to wear down, reducing the need for maintenance or replacement. We offer flowmeters with a range of liners, electrodes, and sizes, which can meet various conductive liquids.



Areas Of Application

Effluent Treatment Plant

Textile Processing Industries

Sugar Industries

Steel & Aluminum Industries

Food & Drug Industries

Dairy Industries

Sewage Treatment Plant Water Supply Scheme

Chemical & Fertilizer Industries

Benefits

- Wide range of nominal diameters (15 NB-600 NB)
- Independent of pressure, temperature, density and viscosity
- No moving parts, maintenance-free
- Automatic power failure recording function (optional)
- Built-in grounding electrodes
- Bi-directional flow measurement
- High accuracy 0.5% available
- Self-diagnosis function, empty pipe alarm, exciting alarm
- Support data record / wireless communication

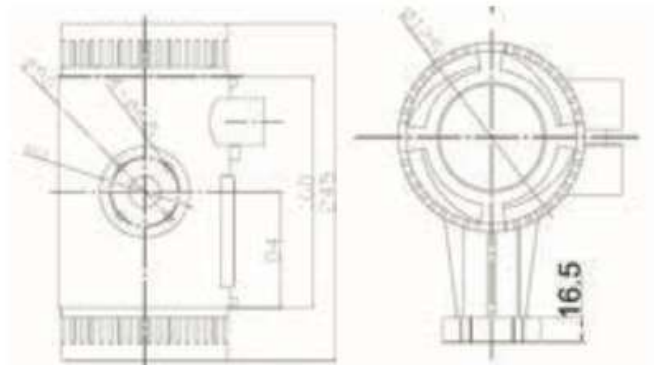


Product Performance & Specifications

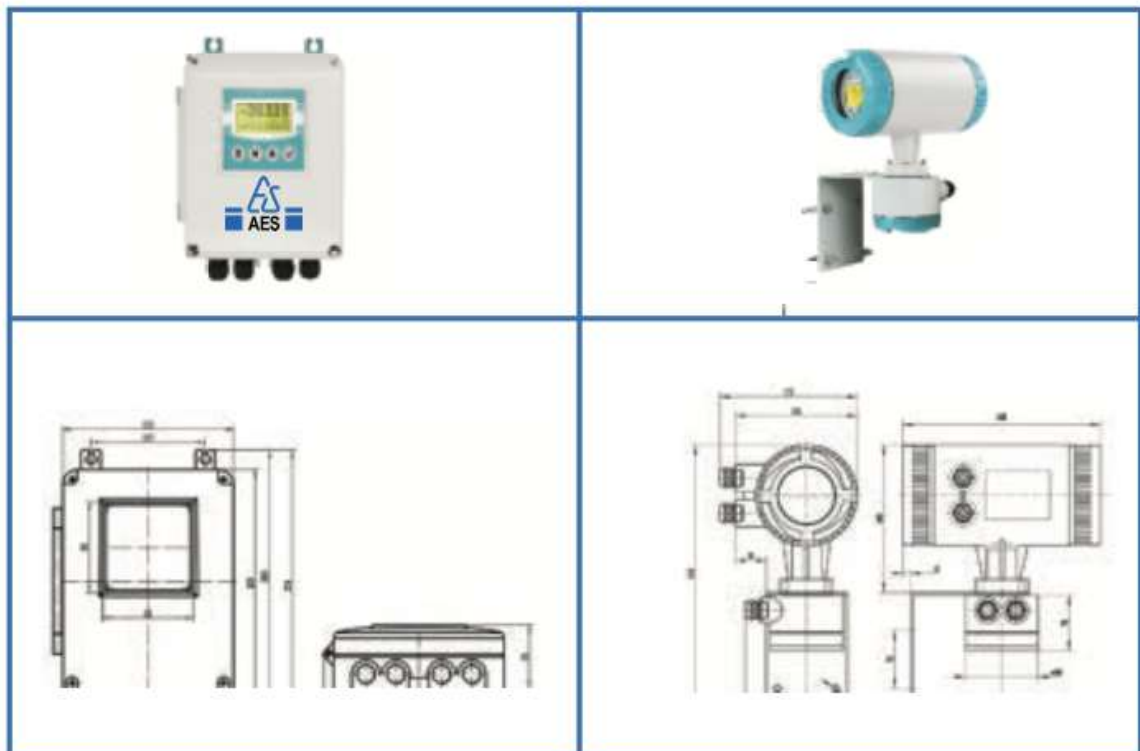
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Size	NB 15 - NB 600 (1/4"-24")
Accuracy	±0.5% of reading at flow velocity ≥ 0.5m/s,
Velocity	0.1-15 m/s
Repeatability	≤0.17%
Structure	Integral / remote, cable length 10m standard, 100m max
Conductivity	> 5 μS/cm, demineralized water > 20 μS/cm
Protection Grade	Transmitter: IP65 standard, IP67 optional Sensor: IP65 standard, IP68 (submersible, only available for remote type)
Electrode	SS316L, Hastelloy C, Titanium, Tantalum,
Power Supply	85~250 VAC (50/60 Hz), 20~36 VDC
Power Consumption	<20W
Signal Output	Analog 4-20mA (load resistor 0-750Ω)
	Frequency Forward & reverse flow output with a frequency range of 1-5000Hz
	Alarm Two isolated open collector transistor (OCT) outputs for alarm signals
Communication	RS485 MODBUS RTU standard, HART, GPRS, PROFIBUS optional
Display	LCD Display, 128X128mm, three lines, 4 buttons
Ambient Temperature	-20°C-60°C
Fluid Temperature	Compact: -20°C-80°C, Remote: -20°C-120°C
Liner Material	PTFE (-20°C-150°C, 15 NB TO 300 NB) Hard Rubber (-10°C-80°C, 50 NB TO 600 NB)
Flange Standard	ANSI
Sensor Material	Measuring tube: SS304 Flange & housing: carbon steel (standard), SS304 / SS316 optional
Transmitter Material	Aluminium alloy with epoxy painting
Nominal Pressure	150# / 300# /ANSI
Display	Instantaneous flow, total flow, flow velocity
Function	High and low alarm, exciting alarm, empty pipe alarm, self-diagnosis
Totalizer	Three built-in totalizers: forward flow, reverse flow and net flow
Display Unit	L/s, L/m, L/h, m3/s, m3/m, m3/h, kg/s, kg/m, kg/h, t/s, t/m, t/h
Language	English

Transmitter Drawing

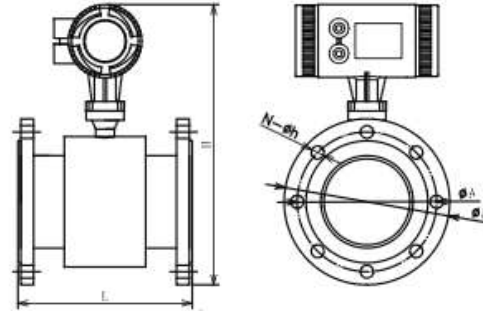


Compact Transmitter



Remote Transmitter

Product Dimension



Size	Flange Standard	Pressure Rate	H (mm)	L (mm)	D	A	N (mm)	φh (mm)
1/2"	ANSI	150#	318	200	88.9	60.45	4	15.7
3/4"	ANSI	150#	323	200	98.6	69.85	4	15.7
1"	ANSI	150#	328	200	108	79.25	4	15.7
1¼"	ANSI	150#	333	200	117.3	88.9	4	15.7
1½"	ANSI	150#	343	200	127	98.6	4	15.7
2"	ANSI	150#	363	200	152.4	120.7	4	19.1
2½"	ANSI	150#	383	200	177.8	139.7	4	19.1
3"	ANSI	150#	398	200	190.5	152.4	4	19.1
4"	ANSI	150#	426	250	228.6	190.5	8	19.1
5"	ANSI	150#	449	250	254	215.9	8	22.4
6"	ANSI	150#	477	300	279.4	241.3	8	22.4
8"	ANSI	150#	538	350	342.9	298.5	8	22.4
10"	ANSI	150#	613	450	406.4	362	12	25.4
12"	ANSI	150#	678	500	482.6	431.8	12	25.4
14"	ANSI	150#	728	550	533.4	476.3	12	28.4
16"	ANSI	150#	784	600	596.9	539.8	16	28.4
18"	ANSI	150#	830	600	635	577.9	16	31.75
20"	ANSI	150#	887	600	698.5	635	20	31.75
24"	ANSI	150#	999	600	812.8	749.3	20	35.1

Performance Of Electrode Material

Electrode Material	Application
SS 316 L	Applicable to industrial and municipal water, wastewater and low corrosive mediums. Widely used in petroleum, chemical industries
Hastelloy C	Exceptional resistance to strong solutions of oxidizing salts and acids, like Fe ⁺⁺⁺ , Cu ⁺⁺ , Nitric acids, mixed acids.
Titanium	Titanium can withstand corrosive mediums such as seawater, chloride salt solutions, hypochlorite salts, oxidable acids (including fuming nitric acids), organic acids, and alkali. Not resistant to high purity reducing acids such as sulphuric acids, hydrochloric acids.
Tantalum	Highly resistant to corrosive mediums. Applicable to all chemical mediums except Hydrofluoric Acids, Oleum and Alkali.

Performance Of Liner Material

Liner Material	Application
PTFE	Best performance of liner material, chemical resistance, withstand boiling hydrochloric acid, sulfuric acid, nitric acid, alkali and a variety of organic solvents. Poor wear resistance and poor adhesion.
Hard Rubber	Withstand the corrosion of hydrochloric acid, acetic acid, oxalic acid, ammonia water, phosphoric acid and 50% sulfuric acid, sodium hydroxide, potassium hydroxide. Use for general acid, alkali, and salt solutions, not resistant to the corrosion of strong oxidants.

Flow Range Table

Flow Range & Velocity Table

Inch	0.1 m/s	0.2 m/s	0.5 m/s	1 m/s	4 m/s	10 m/s	12 m/s	15 m/s
1/2"	0.064	0.127	0.318	0.636	2.543	6.359	7.63	9.538
3/4"	0.113	0.226	0.565	1.13	4.522	11.304	13.56	16.956
1"	0.177	0.353	0.883	1.766	7.065	17.663	21.2	26.494
1¼"	0.289	0.579	1.447	2.894	11.575	28.938	34.73	43.407
1½"	0.452	0.904	2.261	4.522	18.086	45.216	54.26	67.824
2"	0.707	1.413	3.533	7.065	28.26	70.65	84.78	105.98
2½"	1.19	2.39	5.97	11.94	47.76	119.4	143.3	179.1
3"	1.81	3.62	9.04	18.09	72.35	180.86	217	271.3
4"	2.83	5.65	14.13	28.26	113.04	282.6	339.1	423.9
5"	4.42	8.83	22.08	44.16	176.63	441.56	529.9	662.34
6"	6.36	12.72	31.79	63.59	254.34	635.85	763	953.78
8"	11.3	22.61	56.52	113.04	452.16	1130.4	1356	1696
10"	17.66	35.33	88.31	176.53	706.5	1766.25	2120	2649
12"	25.43	50.87	127.2	254.34	1017	2543.4	3052	3815
14"	34.62	69.24	1731	3461.9	1385	3461.85	4154	5193
16"	45	90	2261	452	1809	4522	5426	6782
18"	57	114	2861	572	2289	5723	6867	8584
20"	71	141	3533	707	2826	7065	8478	10598
24"	102	203	5087	1017	4069	10174	12208	15260

Remark: Recommend flow velocity range 0.5~15 m/s

Selection Table

AESMF-		X	X	X	X	X	X	X	X
Size	15 NB - 600 NB								
Structure	Integral		I						
	Remote		R						
Lining Material	PTFE			P					
	Hard Rubber			R					
Electrode Material	SS316L				S				
	Hastelloy C				H				
	Titanium				TI				
	Tantalum				TL				
Sensor Material	Carbon steel					C			
	SS304					S4			
	SS316					S6			
Power Supply	20-36 VDC						D		
	85-265 VAC						A		
	12 VDC solar power						SP		
	Others						X		
Signal Output / Communication	4-20 mA + Pulse + RS485 MODBUS							01	
	4-20 mA + HART							02	
	GPRS							03	
Flange Process Connection	ANSI 150# = A15, ANSI 300# = A30,								A**
	Others								O
AESMF-15NB-I-P-S-C-D-01-A15									





Industries



EFFLUENT TREATMENT PLANT



SEWAGE TREATMENT PLANT WATER SUPPLY SCHEME



STEEL & ALUMINUM INDUSTRIES



FOOD & DRUG INDUSTRIES



A photograph of a chemical or fertilizer production facility, showing large industrial tanks and complex piping systems.


CHEMICAL & FERTILIZER INDUSTRIES

A photograph of a dairy processing line, showing several glass bottles filled with a yellowish liquid, likely milk or cream, on a conveyor belt.

DAIRY INDUSTRIES

A photograph of several large, white sugar cubes, with a magnifying glass focusing on one of them.

SUGAR INDUSTRIES

A photograph of a textile processing machine, showing a complex arrangement of colorful threads (red, yellow, green) being processed.

TEXTILE PROCESSING INDUSTRIES



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